

Date: Thu, 21 Jul 94 04:30:37 PDT  
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>  
Errors-To: Ham-Space-Errors@UCSD.Edu  
Reply-To: Ham-Space@UCSD.Edu  
Precedence: Bulk  
Subject: Ham-Space Digest V94 #200  
To: Ham-Space

Ham-Space Digest

Thu, 21 Jul 94

Volume 94 : Issue 200

Today's Topics:

Antenna questions  
CONNECTING THREE MODEMS  
Downlink signal  
LES9 (2 msgs)  
WEFAX from PYE TELECOMMUNICATIONS PT AM 10DYV Receiver?

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>  
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: Tue, 19 Jul 1994 18:24:19 GMT  
From: ihnp4.ucsd.edu!usc!elroy.jpl.nasa.gov!lll-winken.llnl.gov!quintro!  
rlile.glenqcy.glenayre.com!rel@network.ucsd.edu  
Subject: Antenna questions  
To: ham-space@ucsd.edu

In article <9407181746.ZM13142@SALCIUS2> Wayne\_Estes@csg.mot.com (Wayne\_Estes)  
writes:

>From: Wayne\_Estes@csg.mot.com (Wayne\_Estes)  
>Subject: Antenna questions  
>Date: 18 Jul 1994 17:46:44 -0500

>I installed Az/El rotors on a tripod on my roof this weekend. Next, I plan to  
>buy some M2 antennas: 14 el. CP yagi for VHF  
> 30 el. CP yagi for UHF

>I must use the short VHF antenna because I have light-duty rotors, and a long  
>boom would bump into tree branches and an exhaust vent.

>Can anyone answer the following questions?

>1. Is it (mechanically) easy to build a phasing/relay assembly for RH/LH  
>polarity switching on the M2 antennas?

Answering the mechanical part of the question is simply an issue of having space on the M2 boom for a relay box and the phasing line.

Assuming that the M2 comes with a 50 Ohm phasing line for generating the RH or LH polarization, inserting a relay should not be hard. Do you have the information to do the phase shifting?

>2. Is the M2 crossboom really 10 ft.  
long when assembled?

>3. Would a 7 ft. crossboom be long enough for VHF and UHF yagis on each end,  
>and a future 2x3 ft. dish in the middle? (i.e. without undesired interaction  
>between the antennas)

Yes, I have used 6 to 8 feet and have had no serious (read measureable) problems with my set up. Set up is currently, 12 turn helix on UHF and 10 element crossed yagis on 145 MHz. Tripod mounted on 7 foot cross boom. All homebrew by the way.

>4. Would a preamp at the VHF yagi feedpoint distort  
the pattern of the>antenna? Or should I mount the preamp on the mast?

Again mounting the preamp is mostly a mechanical issue. However, you do want to place it in the feedline before the phasing shifting relay. My preamp is mounted in an aluminum box on the tripod and works good.

>5. Do some preamp  
models switch fast enough (PIN diodes maybe?) to allow me to>transmit  
"through" the preamp without a timing circuit that bypasses the>preamp before  
keying the transmitter? If so, do these preamps require a PTT>line routed up  
to the preamp, or do they detect the RF?

NO, please don't trust any switching method that doesn't use a timing circuit.  
The cost of the preamp vs the timing circuit has no comparison.

>Please  
respond to wayne@csg.mot.com, or to the newsgroup. Thanks in advance.

>73 de WD5FFH (Wayne Estes, Mundelein, IL)

>--

>Wayne A. Estes  
>Motorola Asia-Pacific Cellular Subscriber Division  
>600 N. U.S. Hwy. 45, Rm. A-S345  
>Libertyville, IL 60048-1286  
>PHONE: 1-708-523-2386 Z-MAIL: wayne@csg.mot.com  
>FAX: 1-708-523-8795 POST: w10191@email.mot.com

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Date: 21 Jul 94 00:17:40 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: CONNECTING THREE MODEMS  
To: ham-space@ucsd.edu

Message:

I'm cross-posting to Digital and Space because my questions concern both, so a lot of people will see this twice.

I recently purchased a PacComm PSK-1 satellite modem and last Saturday I purchased the PacComm TNC-NB96 (to celebrate getting my Advanced and passing the Extra written cold, but that's another story). Now I have to figure how to connect everything together. My primary use will be the satellites, both PSK and 9600 FM, but I'm sure I'll do some local stuff, too, now that I'm equipped. The 2M rig is an old Icom IC-251A and the satellite receiver is a Down East Microwave transverter/Kenwood TS-670 combination. Reading through the literature, it looks like I'll be making a LOT of connections. If anyone has any experience with a similar setup or can offer suggestions, please pass them along. What I need to know are things like: 1) Will I have to have separate taps for xmit and rcv for each mode? 2) Can I use some sort of switch box or relay scheme to route the signals or will I be constantly plugging and unplugging? 3) Can I use my direct connections for 9600 FSK for 1200 AFSK? Has anyone else got experience with the PacComm setup? Any suggestions for a good terminal program? Please post here. Thanks in advance. Gary WA4YMZ

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Date: 20 Jul 94 23:45:38 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: Downlink signal  
To: ham-space@ucsd.edu

Message:

Does anyone have any ideas about a problem I seem to have? My downlink signals seem to have a buzz as if there was bad filtering in the power supply of my transmitter. Last night I had a local ham meet me on 144.200 and he says the signal sounds fine. The equipment

here is an IC-251A and Mirage amp for uplink and an TS-690S for recieve. The noise is there whether the amp is on or not. I noticed the same thing on the F0-20 downlink yesterday but didn't hear it today, so it isn't the receiver. The problem originally came up when operating RS-10. Any ideas or other input welcome.

Thanks in advance.

Gary WA4YMZ                            Gary Rogers@dgc.ceo.dg.com

The opinions I express are mine alone. Data General doesn't want them and I change them from time to time anyway.

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Date: Wed, 20 Jul 1994 15:12:33 GMT  
From: newsgate.melpar.esys.com!melpar!jbf@uunet.uu.net  
Subject: LES9  
To: ham-space@ucsd.edu

Anybody know the location of a satellite known as LES9? I believe it is a geosynchronous bird.

Bruce Farquhar                         | "The opinions expressed are mine; nobody  
jfarquhar@melpar.esys.com|                 else would claim them!"

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Date: 21 Jul 1994 01:49:14 -0700  
From: network.ucsd.edu!not-for-mail@network.ucsd.edu  
Subject: LES9  
To: ham-space@ucsd.edu

In article <jbf.774717153@melpar> jbf@syseng1.melpar.esys.com (J. Bruce Farquhar) writes:  
>Anybody know the location of a satellite known as LES9? I believe it  
>is a geosynchronous bird.

Yes, it is a geosync, inclined almost 17 degrees, and sitting at about 106 degrees west.

LES 9  
1 08747U 76023B 94200.91591465 -.00000102 00000-0 10000-3 0 6400  
2 08747 16.6115 283.7785 0024551 111.5271 126.9263 1.00271924 12809

It's operating in the wide band mode at the moment, and you will find

the telemetry at 249.360

Occasionally you'll hear some weekend warriers on it, but other than that, just some data and the BPSK signals from here.

Brent Jones  
Amundsen-Scott South Pole Station  
90 Degrees South,  
Antarctica

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Date: 18 Jul 94 03:40:50 GMT  
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!europa.eng.gtefsd.com!  
news.umbc.edu!hookup!reptiles.org!geac!herboid!cattnts!ncrcan!coutts!  
wwg@network.ucsd.edu  
Subject: WEFAX from PYE TELECOMMUNICATIONS PT AM 10DYV Receiver?  
To: ham-space@ucsd.edu

The issue: Can this receiver work at 137+ Mhz?

I have a PYE aircraft AM transceiver, that was modified to be a RX only unit (which is fine), using the two crystal sockets for two different receive frequencies, since the TX crystal is no longer needed.

The current crystals cause the receiver to receive 123.2 and 122.8 Mhz at the moment. I want to receive the NOAA satellite WEFAX signals on 137.5 and 137.62 Mhz using this old receiver. The crystals currently in there are in the:

$$(123.2 - 10.7) / 3 = 37.5 \text{ Mhz neighbourhood (this is verified).}$$

The 137.5 Mhz freq requires a 42.26666 Mhz crystal.

The receiver details:

PYE TELECOMMUNICATIONS Model PT AM 10DYV  
Serial 1944D, input 12 Volts, and has 4 tubes, of which none are required for receiving (receiver works with switch on standby, without lighting the tube filaments).

It seems a bit of a stretch to go from a 37.5 Mhz crystal to 42.266 Mhz, but there is a series connected inductor that is tunable (at least in the current rendition of its wiring -- I don't have a schematic, so I don't know if this is original or not).

I'm not sure how fussy the front end in this radio is... I doubt any serious problem there. Again with no schematic, and without having

done much tracing from the antenna yet, its my opinion that there is not much "tuned circuit" to discriminate 137 Mhz from 120 Mhz.

Anybody familiar (or not) with this radio, or someone with access to its schematic wish to comment on this? I'll have to get crystal(s) made to try this, which is the reason for this post. Should I invest/waste my money on crystals for this end?

Of course, I'm assuming that NOAA signals are AM audio signals. However, if this should turn out to be FM instead-- no big deal. I can build a demod circuit after the IF section. Email preferred, thanks.

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Warren W. Gay VE3WNG                John Coutts Library Services Limited

wwg@coutts.UUCP                Niagara Falls, Ontario, Canada  
(or wwg%coutts@uunet.ca, wwg%coutts@uunet.uu.net)

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Date: Wed, 20 Jul 1994 13:47:35 GMT  
From: telesoft!garym@uunet.uu.net  
To: ham-space@ucsd.edu

References <STS-65.94189.746@alsys.com>, <STS-65.94197.965@alsys.com>, <STS-65.94199.345@alsys.com>  
Reply-To : elements-request@alsys.com  
Subject : STS-65 Element Set (94201.289)

STS-65  
1 23173U 94039A 94201.28966185 +.00054802 00000-0 15851-3 0 423  
2 23173 28.4662 281.0136 0003249 78.0464 282.0512 15.91226612 1864

Satellite: STS-65  
Catalog number: 23173  
Epoch time: 94201.28966185 (20 JUL 94 06:57:06.78 UTC)  
Element set: GSFC-042a  
Inclination: 28.4662 deg  
RA of node: 281.0136 deg                Space Shuttle Flight STS-65  
Eccentricity: 0.0003249                Keplerian Elements  
Arg of perigee: 78.0464 deg  
Mean anomaly: 282.0512 deg  
Mean motion: 15.91226612 rev/day                Semi-major Axis: 6676.9815 Km  
Decay rate: 5.4802E-04 rev/day\*2                Apogee Alt: 300.76 Km  
Epoch rev: 186                Perigee Alt: 296.42 Km

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Gary Morris                    Internet: elements-request@alsys.com  
KK6YB                        Packet: KK6YB @ N0ARY.#NOCAL.CA.USA.NA  
San Diego, CA, USA            Phone: +1 619-457-2700 x128  
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End of Ham-Space Digest V94 #200

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